

IN THE CLAIMS:

This Listing of Claims replaces all prior Listings and versions of claims in the above-identified application.

Listing of Claims

1-35. (Cancelled)

36. (New) A method to reduce airway hyperresponsiveness in a mammal, comprising increasing $\gamma\delta$ T cell action in a mammal that has, or is at risk of developing, a respiratory condition associated with airway hyperresponsiveness by administering a phosphoantigen to said mammal, wherein administration of said phosphoantigen reduces airway hyperresponsiveness in said mammal.

37. (New) The method of Claim 36, wherein the phosphoantigen comprises isoprenylpyrophosphate (IPP).

38. (New) The method of Claim 36, wherein said phosphoantigen is administered so that the number of $\gamma\delta$ T cells in the lung tissue of said mammal increases.

39. (New) The method of Claim 36, wherein said phosphoantigen is administered so that $\gamma\delta$ T cells in said mammal are activated.

40. (New) The method of Claim 36, wherein said phosphoantigen is targeted to $\gamma\delta$ T cells in the lung tissue of said mammal.

41. (New) The method of Claim 36, wherein said phosphoantigen is targeted to $\gamma\delta$ T cells having a T cell receptor (TCR) selected from the group consisting of a murine TCR comprising V γ 4 and a human TCR comprising V γ 1.

42. (New) The method of Claim 36, wherein said phosphoantigen is administered by a route selected from the group consisting of inhaled, intratracheal and nasal routes.

43. (New) The method of Claim 36, wherein said phosphoantigen is administered to said mammal in an amount effective to reduce airway hyperresponsiveness in said mammal as compared to prior to administration of said phosphoantigen.

44. (New) The method of Claim 36, wherein said phosphoantigen is administered with a pharmaceutically acceptable excipient.

45. (New) The method of Claim 36, wherein said phosphoantigen is administered within between about 1 hour and 6 days of an initial diagnosis of airway hyperresponsiveness in said mammal.

46. (New) The method of Claim 36, wherein said phosphoantigen is administered within less than about 72 hours of an initial diagnosis of airway hyperresponsiveness in said mammal.

47. (New) The method of Claim 36, wherein said phosphoantigen is administered prior to development of airway hyperresponsiveness in said mammal.

48. (New) The method of Claim 36, wherein increasing $\gamma\delta$ T cell action by administration of said phosphoantigen decreases airway methacholine responsiveness in said mammal.

49. (New) The method of Claim 36, wherein increasing $\gamma\delta$ T cell action by administration of said phosphoantigen reduces airway hyperresponsiveness of said mammal such that the FEV₁ value of said mammal is improved by at least about 5%.

50. (New) The method of Claim 36, wherein increasing $\gamma\delta$ T cell action by administration of said phosphoantigen improves said mammal's PC_{20methacholine}FEV₁ value such that the PC_{20methacholine}FEV₁ value obtained before increasing $\gamma\delta$ T cell action when the mammal is provoked with a first concentration of methacholine is substantially the same as the PC_{20methacholine}FEV₁ value obtained after increasing $\gamma\delta$ T cell action when the mammal is provoked with double the amount of the first concentration of methacholine.

51. (New) The method of Claim 50, wherein said first concentration of methacholine is between about 0.01 mg/ml and about 8 mg/ml.

52. (New) The method of Claim 36, wherein said airway hyperresponsiveness is associated with a disease selected from the group consisting of chronic obstructive disease of the airways and asthma.

53. (New) A method to reduce airway hyperresponsiveness in a mammal, comprising increasing $\gamma\delta$ T cell action in a mammal that has, or is at risk of developing, a respiratory condition associated with airway hyperresponsiveness by administering a composition consisting essentially of a phosphoantigen directly to the lung tissue of said mammal, wherein administration of said phosphoantigen reduces airway hyperresponsiveness in said mammal.